

Application Serial Number: 09/885,408  
In response to Office Action dated April 22, 2004

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1, 3-6 and 8-13 are presently active in this case; Claims 1, 4, 6, 8, 10 and 11 having been amended and Claims 12 and 13 canceled by way of the present amendment.

The Office Action Summary indicated that the proposed drawing correction filed on January 26, 2004 is approved. However, Applicants note that no proposed drawing correction was filed on January 26, 2004. And therefore, Applicants submit that no corrected drawings are required in response to the Official Action.

In the outstanding Office Action Claim 1 was objected to, Claims 1, 3-5, 9, and 12-13 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,844, 918 to Kato in view of International Patent No. WO98/58468 to Tanaka et al. (hereafter “WO Tanaka et al.”), and further view of WO 00/21236 to Khan et al.; and Claims 6, 8-11 were rejected under 35 U.S.C. § 103(a) as unpatentable over Kato in view of U.S. Patent No. 5,781,542 to Tanaka et al. (U.S. Tanaka) and further in view of GB 2313237 to Winnett.

First, Applicants wish to thank Examiner Lamarre for the July 29, 2004 personal interview, at which time the outstanding issues in this case were discussed. During the interview, Applicants presented amendments and arguments substantially as indicated in this response. Examiner Lamarre agreed that the cited PCT reference to Tanaka et al. would be withdrawn and further that he would consider the effect of our clarifying amendments to the independent claims when filed in a formal response.

Application Serial Number: 09/885,408  
In response to Office Action dated April 22, 2004

With regard the objection to Claim 1, Claim 1 has been amended to correct the informalities noted in the outstanding Official Action. Thus, the objection to Claim 1 is believed to be overcome.

Turning now to the merits, in order to expedite issuance of a patent in this case, Applicants have now amended independent Claims 1, 4, 6, 10 and 11 to clarify the patentable features of the claimed invention over the cited references.

Specifically, Claim 1, as amended, recites a communication method including “c) reporting from the reception station to the transmission station the reliability of the received packet, utilizing the ACK/NACK signal, wherein the NACK signal expresses at least two levels of reliability.” Applicants’ independent Claims 4 and 9 have also been amended to recite that the NACK signal expresses at least two levels of reliability. An example of this scheme is shown in Table 1 of Applicants’ specification, which shows 7 levels as NACK(0) through NACK(6). As discussed in the July 29<sup>th</sup> interview, the reporting of reliability information in this way is advantageous over the conventional way by two levels (ACK/NACK) because, for example, it allows reduced storage in a storage buffer as shown and described in Fig. 2, or optimum transmission parameters as shown and described in Fig. 3. By employing a 2 level NACK scheme, it is possible to perform re-transmission control more finely. In fact, by expressing the NACK signal by at least two levels, in comparison to a case where the NACK signal is expressed only by one level (i.e. no good), some received packet which is not completely correct but may be used to help (together with another packet) finally obtain the complete information, may be utilized effectively. Thus, it is possible to effectively control required power for re-transmission to the minimum necessary level.

In contrast, the cited references do not teach or suggest the NACK signal feature of Claim 1. The Official Action acknowledges that Kato does not teach obtaining and reporting reliability, and the Examiner has indicated that the Japanese language PCT publication WO Tanaka et al. will be withdrawn. The cited reference to Khan also does not disclose this feature. In this regard, Applicants note that the outstanding Official Action fails to address the features of an ACK/NACK signal having 3 or more levels as previously claimed. Thus, Applicants respectfully request that any forthcoming Office Action address the limitation of a NACK signal expressing at least 2 levels of reliability as now claimed in Claims 1, 4, and 9.

Further, with respect to Claim 1, according to the present invention claimed in claim 1, it is determined whether or not the received packet is stored and combined with a re-transmission packet. In this scheme, the currently received packet may be combined with the re-transmission packet which is transmitted after the currently received packet was transmitted. Thus, a time delay exists in the transmission time between the currently received packet and the re-transmission packet. Such a scheme is clearly different from the art of Khan's hybrid ARQ scheme in which combination is performed among packets which are transmitted simultaneously. That is, as discussed in the July 29<sup>th</sup> interview, Khan does not disclose a system or method whereby a previously transmitted packet is combined with a retransmitted packet.

According to claim 6, the plurality of reception stations generating ACK/NACK signals transmit them to both the transmission station and a host station of the plurality of reception stations. Claim 9 similarly recites that the reception station reports to both the transmission station and a host station of the plurality of reception stations in combination

Application Serial Number: 09/885,408  
In response to Office Action dated April 22, 2004

with the feature of the NACK signal having at least 2 levels of reliability. Still further Claim 10 and 11, as amended, similarly recite that the ACK/NACK signal is transmitted to both the mobile station and a host station. The feature of transmitting the ACK/NACK signal to both the transmission station (or mobile station) and the host station allows the host station and transmission stations to independently determine whether or not a packet error occurs, which provide improved communication speed. As discussed in the July 29<sup>th</sup> interview, this feature is also not disclosed in the cited references or addressed in the outstanding Official Action.

***Therefore, Applicants respectfully request that any forthcoming Official Action in this case address the limitation of transmitting the ACK/NACK signal to the transmission station (or mobile station in Claims 10 and 11) and the host station.***

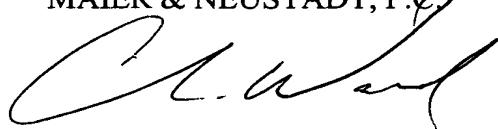
For the reasons discussed above, Claims 1, 4, 6, and 9-11 patentably define over the cited references. Moreover, as Claims 3, 5, and 8 depend from Claims 1, 4, and 6 respectively, these claims also patentably define over the cited references.

Application Serial Number: 09/885,408  
In response to Office Action dated April 22, 2004

Consequently in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



Bradley D. Lytle  
Registration No. 40,073

Edwin D. Garlepp  
Registration No. 45,330

Christopher D. Ward  
Registration No. 41,367

BDL:EDG:tdm  
I:\ATTY\EDG\209657\209657USAM 04.22.04 OA.doc